

TRANSLATION**PATENT COOPERATION TREATY****PCT****INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2003P06167WO	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/EP2004/004740	International filing date (day/month/year) 04.05.2004	Priority date (day/month/year) 18.06.2003
International Patent Classification (IPC) or national classification and IPC INV. G05B19/05 G05B19/418		
Applicant SIEMENS AKTIENGESELLSCHAFT		

1.	This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2.	This REPORT consists of a total of <u>7</u> sheets, including this cover sheet.
3.	This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4.	This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input checked="" type="checkbox"/> Box No. VII Certain defects in the international application <input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/004740

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:
 - ☐ international search (Rule 12.3 and 23.1(b))
 - ☐ publication of the international application (Rule 12.4)
 - ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
 - ☐ the international application as originally filed/furnished
 - ☒ the description:
 - pages 1-13 _____ as originally filed/furnished
 - pages* _____ received by this Authority on _____
 - pages* _____ received by this Authority on _____
 - ☒ the claims:
 - nos. 1-24 _____ as originally filed/furnished
 - nos.* _____ as amended (together with any statement) under Article 19
 - nos.* _____ received by this Authority on _____
 - nos.* _____ received by this Authority on _____
 - ☒ the drawings:
 - sheets 1/3-3/3 _____ as originally filed/furnished
 - sheets* _____ received by this Authority on _____
 - sheets* _____ received by this Authority on _____
 - ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description, pages _____
 - ☐ the claims, nos. _____
 - ☐ the drawings, sheets/figs _____
 - ☐ the sequence listing (*specify*): _____
 - ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages _____
 - ☐ the claims, nos. _____
 - ☐ the drawings, sheets/figs _____
 - ☐ the sequence listing (*specify*): _____
 - ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/004740

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>1-24</u>	YES
	Claims _____	NO
Inventive step (IS)	Claims _____	YES
	Claims <u>1-24</u>	NO
Industrial applicability (IA)	Claims <u>1-24</u>	YES
	Claims _____	NO

2. Citations and explanations (Rule 70.7)

This statement refers to the following documents (D); the same numbering will be used throughout the proceedings:

D1: EP-A-1 296 232 (SIEMENS ENERGY & AUTOMAT) 26

March 2003 (2003-03-26)

D2: WO 97/26587 A (WENDEL VOLKER; SIEMENS AG (DE);

STRIPF WOLFGANG (DE)) 24 July 1997 (1997-07-24)

D3: SIEMENS AG, PRESSEABTEILUNG: "Siemens verleiht

Erfinderpreis 2002" 17 December 2002 (2002-12-

17), SIEMENS AG, MUNICH, XP002294786, found on

the Internet: URL:[http://w4.siemens.de/ct/](http://w4.siemens.de/ct/de/news/2002_2_003/ct200212004d.pdf)

[de/news/2002_2_003/ct200212004d.pdf](http://w4.siemens.de/ct/de/news/2002_2_003/ct200212004d.pdf)>

D4: DE 101 32 036 A (SIEMENS AG) 23 January 2003

(2003-01-23)

D5: DE 101 38 533 A (SIEMENS AG) 11 July 2002

(2002-07-11)

1. The subject matter of **claim 1** does not meet the requirements of inventive step (PCT Article 33(3)) with respect to D1 and D4:

D1 discloses a method for programming and/or executing programs for industrial automation

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/004740

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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systems (paragraph [0001]), wherein modules and functions are modelled and/or established and are structured and networked with input means (paragraph [0022]: the graphic establishment of "Function Block Diagrams" requires precisely these steps), and therefore the latter, as at least one machine-independent program, form at least one hierarchical tree (column 8, lines 40-42 and paragraph [0025], cf. also D5, page 2, lines 54-55 and page 3, lines 22-24: XML documents have the structure of hierarchical trees).

The difference between the subject matter of claim 1 and that of D1 is that the program in D1, prior to being loaded and executed in a component of the automation system, is translated (compiled) into a machine-specific code.

The problem of interest is therefore that of indicating a method which simplifies the loading and execution of the programs.

D4 describes the method of translating the program code known from D1 as extremely time-consuming and expensive (page 7, paragraph 2). To solve the problem, D4 indicates a basic method which enables a component of an automation system (i.e. machine control system) directly to understand a machine-independent program (model) and let the latter run directly. This solution is identical to the one indicated in claim 1. A person skilled in the art treating the problem of interest in the prior art

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/004740

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
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known from D1 by D4 *expressis verbis* would therefore arrive at the subject matter of claim 1 without being in the slightest inventive in so doing.

The same reasons and arguments also apply, *mutatis mutandis*, to independent **claims 14, 23 and 24**.

2. Dependent **claims 2-13 and 15-22** constitute merely an agglomeration of well-known standard methods of object-oriented programming that do not substantiate an inventive step with respect to the cited documents D1-D5 and general technical knowledge.
3. Attention is drawn to the fact that, insofar as an examination of the application is requested under Chapter II of the PCT, a positive examination report is only possible if the subject matter of newly submitted independent claims 1 and 14 differs from the prior art (D1) by means of unique technical features which clearly relate to the subject matter disclosed. The applicant should advance substantiated arguments in the letter of response which show that the new independent claims meet the requirements of PCT Article 33(1) to (3) with respect to the cited prior art (D1-D5).

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/004740

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

1. The new independent claims should still be drafted in the two-part form pursuant to PCT Rule 6.3(b).
2. Reference signs should be used in the claims (PCT Rule 6.2(b)).
3. The statement of the invention beginning on page 3, line 23 of the description should be brought into strict concordance with the content of the new claims.
4. The prior art shown in D1 and D4 should be acknowledged in the introduction.
5. When the claims are revised, care should be taken to ensure that there is a basis in the original documents for the subjects of the new claims (Article 41(2)). Any possible letter of response should therefore indicate precisely the original passages on which the amendments in the new claims are based.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/004740

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Independent claims 23 and 24 are unclear for the following reasons (PCT Article 6):

- a) Independent claims 1 and 23, and 14 and 23, define the claimed subject matter multiply and differently in the same category.
- b) A computer program is not a physical object. It is therefore not possible to implement a physical device therewith (claim 23).
- c) The mere installation of a computer program on a data processing system constitutes nothing more than a storing of program data on the data processing device. The data processing device is therefore merely a kind of data carrier characterised by the data stored on it (claim 24).